

ULTRA-ZOOM CAMERAS

INTRODUCTION

A digital camera's zoom is its most important feature. The 3x zoom found in most digital cameras provides a blinkered view of the world, and, unless your camera came bundled with a jet pack, you'll struggle to compose truly great photos with such a limited zoom range.

A larger zoom is often all it takes to turn a casual snapper into a creative photographer. It gives you much broader scope to explore interesting compositions within a view, creating symmetries and juxtapositions within the frame. You don't have to have creative aspirations to appreciate a big zoom, though. You'll suddenly find that you're able to capture distant subjects with as much detail as the naked eye can see. You'll also be able to photograph people while keeping your distance, which invariably results in more natural, relaxed portraits.

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Music and photography expert

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SONIC ZOOM

Ultra-zoom digital cameras help you take fantastic photos, but which model is right for you? We've tested 12 of the best to help you get the bigger picture at a smaller price

Choosing an... Ultra-zoom camera

For a given size of sensor, the magnification achieved by a zoom lens is dictated by the distance between the centre of the lens and the CCD. This distance is called the focal length. When we talk about a 3x or 10x zoom, this value is the ratio between the shortest and longest focal lengths a lens is capable of. Bigger is better, but there's more to a zoom's specifications than this simple figure. Zoom ranges are commonly quoted in the format 35-350mm. These are the equivalent focal lengths that would produce the same results in a 35mm film camera. In a digital camera they're really much shorter because the charge-coupled device (CCD) is smaller than 35mm film, so the entire lens mechanism can be miniaturised accordingly. However, focal lengths of digital cameras are quoted as 35mm-equivalent values, as this helps us compare like with like, regardless of the size of the CCD.

To find out more about a camera's zoom, you also need to look at its focal length range. A fairly typical 3x zoom for a compact digital camera is 35-105mm, but entry-level digital SLRs tend to come with 18-55mm lenses. This gives a wide-angle view that's more similar to the panoramic view humans can see, but the downside is that everything is smaller. At the opposite end of the scale, the ultra-zoom cameras on test here

have ranges in the region of 38-380mm, which means their wide-angle view is similar to the average compact camera, but they magnify up to four times as much at their extreme telephoto setting. The two exceptions are the Fujifilm cameras, which range from 28-300mm. This gives a slightly less enlarged maximum setting but enables wider-angle photography at the opposite end.

Zoom ranges are all about ratios, so the difference between a 28mm and a 35mm focal length is just as acute as the difference between 300mm and 375mm.

Adding more pixels to your CCD is also beneficial for photographing far-off subjects. However, a 10 per cent increase in focal length gives you 10 per cent more detail both vertically and horizontally. This is much more beneficial than 10 per cent more pixels, which gives you a resolution just under 5 per cent higher on each axis. In short, a big zoom is good news.

FIT THE STABILISERS

The downside of all this magnification is that any wobbles are magnified, too. It's a generally accepted rule that you can achieve a sharp image without blur from camera shake if the shutter speed is one divided by the focal length. This means that, with a 35mm focal length, you can shoot at around $\frac{1}{35}$ seconds and keep



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things sharp, which is a reasonably practical figure for shooting in bright artificial lighting. However, increase the focal length to 400mm and you need a 1/400-second shutter speed, which is normally practical only in bright sunlight.

The simplest solution to this problem is to use a tripod, which banishes shakes altogether. The cheapest is to go into a Zen-like meditative state, eliminating any movement by sheer will-power, but the best solution is to choose a camera with optical image stabilisation. These systems use tiny gyroscopic sensors that detect movement as the picture is taken, and adjust either the lens or the CCD position to counteract it. However, the results can be hit and miss, as they can compensate by only a small amount. If you go beyond these limitations, the picture will probably be as blurry as if you didn't use stabilisation at all.

The second-best solution is to use a high ISO setting, which increases the CCD's sensitivity and thus allows for faster shutter speeds. Double the ISO speed and you can double the shutter speed, although the downside is that you'll also be doubling the amount of image noise.

Unlike image stabilisation, this reduces only the amount of blur rather than attempting to counteract it, so it usually needs to be coupled with your best meditative skills when shooting at high telephoto settings. However, high ISO speeds will reduce blur caused by a moving subject as well as a moving photographer, which can be useful.

SNAP DECISION

Armed with this knowledge, you should have a good idea of what makes a good ultra-zoom camera. However, it's also vital that the camera you choose fits all the usual criteria, too: high image quality, not just in well-lit conditions but also when shooting in low and artificial light or using the flash. Creating a large zoom range puts bigger challenges on the lens design, so these cameras are more susceptible to inconsistent focus, whether in the corners of images at wide-angle settings or because the auto-focus gets confused at high telephoto settings.

Battery life, performance and ergonomics must be considered, too. Because many of these cameras appeal more to enthusiasts, they should include advanced photographic options, along with accessible controls and clear visual feedback for adjusting them.

We have reviewed all the ultra-zoom digital cameras currently available, with only the odd exception that we've already covered in previous reviews. We're delighted to report that we found three fantastic cameras for three different sorts of user, so turn the page to discover the one that's perfect for you.

How we test Digital cameras

To test the image quality of each camera, we shot 36 controlled scenes with each one. Every scene was designed to reveal specific flaws in the camera. Our photo of a garden tested each camera's ability to capture fine detail in bright conditions. A number of portrait shots tested the accuracy of skin tones in direct sunlight, ambient light both indoors and out, artificial light with automatic and tungsten white balance modes and with the flash at distances of one, two and three metres. In our video tests, we looked for sharp focus and auto-exposure that reacted smoothly to changes in lighting conditions.

We also examined the results in artificial and low lighting, checked zoom controls and considered the quality of the soundtrack. To test performance, we measured how long it took each camera to turn on and take a picture, and also how many maximum-quality pictures it captured in 30 seconds in bright conditions. We repeated this test in dark conditions with and without the flash and in continuous mode. We test battery life by using a mechanical arm to take a picture every 30 seconds until the battery is depleted. For cameras that use AA batteries, we used two 2,300mAh nickel metal hydride batteries.

CANON

PowerShot S3 IS

★★★★

£243 inc VAT

We first reviewed the S3 IS in *What's New, Shopper* September 2006 and found it to be a capable performer but a little overpriced. Its price has since fallen, so we were curious to see how it compares. The sturdy plastic case gives the camera a business-like appearance, and the generous smattering of controls show that this is an enthusiast's model. The 2in screen flips out for self-portraits and shooting from awkward angles, although its 150,000-pixel resolution isn't quite enough for manual focusing, despite a picture-in-picture displayed while making adjustments.

Manual exposure is well implemented, with buttons dedicated to shutter speed, aperture and ISO speed plus an informative preview picture. The zoom motor is dual speed for fast and accurate framing of subjects and overall performance is among the fastest here, capturing a shot every 1.4 seconds in normal shooting mode and at 1.5fps in continuous mode.

Image quality was generally excellent, although skin tones were often too pink under natural light and the autofocus misjudged a few scenes. Noise crept into view at ISO 200 and was quite heavy at ISO 800. However, we admire Canon's policy not to overdo noise reduction. The S3 IS's noise is fairly monochromatic and so resembles the grain you'd get from ISO 400 film. Still, FujiFilm's S6500fd provides the best solution, suffering far less noise in the first place.

The S3 IS is still a great camera, but it also remains a little overpriced.



SUMMARY

- ✓ Dependable image quality
- ✓ Good for self portraits
- ✗ A bit pricy

ULTRA-ZOOM DIGITAL CAMERA
6.0 megapixels (2,816x2,112 pixels),
12x optical zoom, 16MB MMC
memory, SD slot, 4x AA (alkalines
supplied) batteries
PART CODE 11018007AA
SUPPLIER www.rankhour.com
DETAILS www.canon.co.uk

FUJIFILM

FinePix S6500fd
Zoom

★★★★★

£231 inc VAT



With its lens rings giving tactile control over zoom and focus, the 6500fd has more in common with the pricy FujiFilm 9600 and Panasonic FZ50 cameras than those in the £200-£250 price bracket. It matches the more expensive cameras' bulk, too, but as a result it's extremely comfortable to hold. There are no command dials for quick exposure adjustments but the menu system is efficient. The 11x zoom lens starts at 28mm (35mm equivalent) for wide-angle photography, and a highly effective face-detection system helps with focusing and exposure of portraits of up to 10 people.

The S6500fd came top in our tests for colour accuracy, and despite the relatively modest 6-megapixel rating, detail was above average too. Noise was barely perceptible at ISO 400, while ISO 800 shots looked far better than from any other camera here. The ISO control goes all the way up to ISO 3,200, but shots at ISO 1,600 and above lose a lot of detail and suffer from ragged edges, which are side effects of noise-reduction processing.

The upshot is that you'll need to use manual ISO settings to get anything approaching the best from this camera. In a compact camera this could be a serious problem. However, the S6500fd is aimed at enthusiasts. For such people, the immaculate image quality and fantastic handling are astounding at such a low price.



SUMMARY

- ✓ Fantastic image quality
- ✓ Manual focus; superb handling
- ✓ Very low noise at ISO 800

ULTRA-ZOOM DIGITAL CAMERA
6.1 megapixels (2,848x2,136 pixels),
11x optical zoom, 10MB internal
memory, xD slot, 4x AA (alkalines
supplied) batteries
PART CODE N077950A
SUPPLIER www.savastore.com
DETAILS www.fujifilm.co.uk

FUJIFILM

FinePix S9600
Zoom

★★★★

£300 inc VAT

The S9600 is very similar to the S9500 it replaces. Its headline specifications are unchanged but a new processor promises improved autofocus times and image sharpness. The screen is bigger and more detailed, but a 2in screen is still small by today's standards.

Because the lens doesn't retract into the body of the camera, it's ready to shoot as soon as you switch it on. Performance is generally excellent, with a 1.3-second gap between shots. The improved autofocus quickly locks on to subjects even in very low light. However, continuous mode is disappointing at 0.75fps, and browsing photos from an xD card is very slow. Otherwise, the S9600 is a joy to use, with a fold-out screen for shooting at awkward angles and lots of controls, including a lens rings for zoom and focus. A command dial handles exposure adjustments but it's quite slow to make large adjustments to the shutter speed.

Image quality is generally on a par with the S6500fd. The 9-megapixel sensor captures slightly more detail but comes at the expense of a little more noise. Automatic ISO speed is available only in the dumbed-down Auto mode, although most users will be happy to set it manually.

The S9600 is certainly a lovely camera, but we expect image stabilisation at this price.



SUMMARY

- ✓ Excellent image quality
- ✓ Fast performance
- ✗ Few benefits over S6500fd

ULTRA-ZOOM DIGITAL CAMERA
9.0 megapixels (3,488x2,616 pixels),
11x optical zoom, no memory, xD and
CompactFlash slots, 4x AA (alkalines
supplied) batteries
PART CODE N077960A
SUPPLIER www.amazon.co.uk
DETAILS www.fujifilm.co.uk

KODAK

EasyShare P712

★★★★

£236 inc VAT

The 'P' in P712 stands for performance, and the camera certainly looks racy with its curvy body and rubber trim. The zoom takes the metaphor too far, though, making a din like a go-kart as it steps through its two-speed movement. This obliterates the soundtrack during video recording.

The deluge of buttons and dials means controls are quick to access. The white balance and autofocus zone are the only commonly used functions for which you'll need to visit the menu. Dedicated buttons for flash, drive and focus modes mean the joystick-style navigation control can concentrate on more interesting tasks when not navigating the menu, such as manual focus or spot focus point. The big screen and a zoomed picture-in-picture make manual focusing easy, and there's a command dial for quick exposure adjustment. Performance is fast at just 1.5 seconds between shots, but the camera needs a 15-second rest every 10 shots.

Image quality was a little variable, but colour accuracy was often excellent, while detail was above average. However, even at the lowest ISO 64 setting we detected hints of noise, and at ISO 200 it was becoming intrusive. The camera keeps to low ISO values in automatic modes, but this meant that low-light shots were often underexposed or blurry.

The P712 is a decent camera but its handling and image quality are eclipsed by the FujiFilm S6500fd.



SUMMARY

- ✓ Well-designed controls
- ✗ Image noise
- ✗ Noisy zoom

ULTRA-ZOOM DIGITAL CAMERA 7.1
megapixels (3,072x2,304 pixels), 12x
optical zoom, 28MB internal memory,
SD slot, 3.7V 1,800mAh li-ion battery
PART CODE 8657009
SUPPLIER www.rankhour.com
DETAILS www.kodak.co.uk

KODAK EasyShare Z710

★★

£200 inc VAT



The Z710 is amazingly small for an SLR-styled camera but it feels a little cramped, and its design seems a bit too cute to be taken seriously. The flash pops up every time you switch on, which feels a little patronising. There is a decent smattering of buttons, and the joystick control handles manual exposure adjustments well. However, options such as manual focus, manual white balance and high ISO modes are missing. ISO 400 is the top setting at full resolution, while ISO 800 is available only when shooting at 1.9 megapixels.

Performance was the worst here by a margin. The first couple of shots were captured in two to three seconds, but the gap between shots quickly rose to around 10 seconds as the camera struggled to save pictures to its SD card. The continuous mode is limited to bursts of three pictures and the video mode manages just 10fps at 640x480 resolution. Battery life is below average too, at 276 shots from a pair of Ni-MH cells.

Image quality varied in our tests. In sunlight it produced some of the most realistic skin tones of any camera here, but indoor portraits were less flattering, appearing underexposed using available light and rather pasty with the flash. Detail was generally sharp, but the edges of pictures suffered from chromatic aberration, giving a halo of blue and red on either side of high-contrast objects.

We get the impression that the Z710 is pitched more towards casual users than enthusiasts, but its slow performance will please no-one.

SUMMARY

- ✓ Compact design
- ✗ Slow performance
- ✗ Omits various key features

ULTRA-ZOOM DIGITAL CAMERA
7.1 megapixels (3,082x2,314 pixels),
10x optical zoom, 27MB internal
memory, SD slot, 2x AA (disposable
lithium supplied) battery
PART CODE 8044471
SUPPLIER www.currys.co.uk
DETAILS www.kodak.co.uk

NIKON CoolPix S10

★★★★★

£214 inc VAT



With its basic controls and slim design, the CoolPix S10 is aimed at casual snappers rather than enthusiasts. Nikon manages to squeeze a 10x zoom lens into the slim aluminium body by mounting it vertically. The lens section pivots from the screen and controls to allow comfortable use. It's not ultra-compact, but the slim design fits pockets and handbags much better than an SLR-styled camera.

Performance is respectable, with a two-second gap between shots, and browsing photos stored on SD card is quick. There are no priority modes or manual focus, but all the essential controls and options are in place, along with a dedicated button for a Face Priority mode that looks for faces to focus on. Another button activates the optical image stabilisation, and in our tests it was by far the most effective of any such system here: shooting with a $\frac{1}{45}$ -second shutter speed at the full 10x zoom, every shot came out sharp. Focusing was slow at extreme telephoto settings, though.

The S10 didn't excel in picture quality but it was reliable, with no bad pictures in our 50-odd test shots. Our only major criticism is a tendency to use very long shutter times rather than high ISO speeds in low light. However, noise isn't intrusive at ISO 400 or even ISO 800, so with some manual tweaking, low-light photography can look impressive.

The S10's superior image quality puts it ahead of the similar Panasonic TZ1. Meanwhile, the 10x zoom lens makes it much more capable than similarly priced 3x zoom cameras.

SUMMARY

- ✓ Highly effective stabilisation
- ✓ Compact design
- ✗ Limited manual control

ULTRA-ZOOM DIGITAL CAMERA 6.0
megapixels (2,816x2,112 pixels), 10x
optical zoom, 16MB internal memory,
SD slot, 3.7V 1,100mAh li-ion battery
PART CODE VAA680B1
SUPPLIER www.rankhour.com
DETAILS www.nikon.co.uk

OLYMPUS SP-510 UltraZoom

★★

£208 inc VAT



The design of the SP-510 is distinctly utilitarian and we found the menus on the low-resolution screen confusing. Selecting manual or spot autofocus from the menu switched the navigation buttons to these tasks for further adjustment. However, this meant we couldn't access the navigation buttons' labelled functions: macro, exposure compensation and flash mode. As a result, we had to think tactically to access certain combinations of features simultaneously. Elsewhere, we inadvertently activated a high-sensitivity mode.

The camera isn't particularly fast, taking an average of three seconds between photos. Battery life was the best we've ever seen at 939 shots, but that was with four AA Ni-MH batteries, which you'll need to buy separately.

The SP-510's image quality was impressive. Colour reproduction was dependable, detail was above average and noise was under control. Noise-reduction artefacts were just visible at ISO 200 but the camera managed to produce passable images up to ISO 1,600. However, while focus was sharp in the centre of photos, the corners were often blurry and suffered from chromatic aberration, where the red, green and blue elements don't line up. Video recording reacted jarringly to changes in lighting and was limited to 15 seconds at maximum quality.

Olympus makes no major mistakes with the SP-510 but the camera has too many annoying habits to warrant recommendation.

SUMMARY

- ✓ Huge battery life
- ✗ Ill-conceived controls
- ✗ Image quality dips at corners

ULTRA-ZOOM DIGITAL CAMERA
7.1 megapixels (3,072x2,304 pixels),
10x optical zoom, 22MB internal
memory, xD slot, 4x AA (alkalines
supplied) batteries
PART CODE 6952
SUPPLIER www.morecomputers.co.uk
DETAILS www.olympus.co.uk

PANASONIC Lumix DMC-FZ50

★★★★★

£347 inc VAT



We first looked at the FZ50 in *Shopper* January 2007, but as it's the best ultra-zoom camera we've seen, we felt obliged to revisit it in this Labs test. It costs almost as much as an entry-level digital SLR, but the 12x zoom, stabilised lens, 10-megapixel sensor and wide array of controls go a long way towards justifying the high price.

Lens rings for zoom and focus and two command dials make light work of manual adjustments, and the high-resolution foldout screen with digital zoom helps make this the best non-SLR camera we've seen for manual focusing. The only hitch is in low light, where the screen is slow to update. Video capture is impressive, recording at a widescreen 848x480 resolution with smooth optical zoom available. In our still image tests, it produced consistently lifelike colours and sharp detail, and its stabilisation worked particularly well. ISO 800 shots exhibited noise-reduction artefacts, but image quality at ISO 400 was good.

A digital SLR with comparable specifications to the FZ50 (specifically, its 12x optically stabilised lens) would cost at least £1,500. In this sense, the FZ50 is a bargain. Its ergonomics and handling are way beyond those of any other fixed-lens camera we've seen. Even taking into account the noise-reduction issue, image quality is in a different league to the other cameras on test, and certainly comparable to an entry-level digital SLR.

SUMMARY

- ✓ Superb handling
- ✓ Sumptuous image quality
- ✗ High-res video with zoom

ULTRA-ZOOM DIGITAL CAMERA
10.0 megapixels (3,648x2,736 pixels),
12x optical zoom, 32MB SD card
memory, SD slot, 7.2V 710mAh li-ion
battery
PART CODE DMC-FZ50EB-S
SUPPLIER www.cameras2u.com
DETAILS www.panasonic.co.uk

PANASONIC Lumix DMC-FZ7

★★★★★

£209 inc VAT



When the DMC-FZ7 was first announced in January 2006, £299 was a remarkable price for such a well-specified camera. Today, only the relatively modest 80-400 ISO range and 114,000-pixel resolution of the 2½in screen give any hint of a dated design. In fact, ISO 800 and 1,600 are available via a High Sensitivity scene preset.

Image quality at high ISO settings isn't great, however. As we've seen so many times with Panasonic cameras, noise-reduction processing obliterates detail and gives photos a swirly, painted appearance. ISO 200 is passable but we wouldn't touch the ISO 400 setting. As a result, and despite the highly effective optical image stabilisation, this camera isn't ideal for low-light photography. Otherwise, though, image quality is well above average, with problem-free colour reproduction and sharper detail than many high-specified cameras.

Performance is the best of all the cameras on test, capturing a picture every second at maximum quality and two per second in continuous mode. A joystick control provides efficient access to the most important controls, including an effective manual focus. However, the lack of a macro button is a mistake. Instead, the macro mode is situated on the mode dial, which means it can't be accessed at the same time as the priority or manual exposure modes.

Despite its quirks, the FZ7 still holds its own against the younger competition. At just £209 including a li-ion battery, it's excellent value.

SUMMARY

- ✓ Fast performance
- ✓ Effective image stabilisation
- ✗ Poor quality at high ISO settings

ULTRA-ZOOM DIGITAL CAMERA 6.0 megapixels (2,816x2,112 pixels), 12x optical zoom, 16MB SD card memory, SD slot, 7.2V 710mAh li-ion battery
PART CODE DMC-FZ7EB-K
SUPPLIER www.amazon.co.uk
DETAILS www.panasonic.co.uk

PANASONIC Lumix DMC-TZ1

★★★★★

£211 inc VAT



The TZ1 is a 10x zoom camera that's barely bigger than most 3x zoom cameras. Nikon's S10 and Kodak's V610 (reviewed in *What's New, Shopper* December 2006) achieve similar results with some clever thinking, but Panasonic does it through engineering prowess. There is one compromise: the lens focuses light only on a 5-megapixel area of the 6.3-megapixel sensor.

In use, the camera is identical to Panasonic's ultra-compacts. There are no manual exposure or focus options but exposure compensation is close to hand and the menu gives straightforward access to ISO, white balance and other options. A dedicated button activates the optical image stabilisation. This wasn't quite as successful as in the other two Panasonic cameras, but this is down to the others' more comfortable grips, which makes them easier to hold steadily. Performance is excellent, with a fast autofocus, 1.6 seconds between shots and a 2fps continuous mode.

The TZ1's 5-megapixel effective resolution meant it was off to a bad start for capturing detail, but even pixel-for-pixel, its output looked a little soft compared to the others. More worrying was that Panasonic's noise-reduction smudging was more noticeable than ever, even at ISO 100. This is a big disappointment because colour accuracy was more than up to scratch, with punchy, vibrant colours and pleasing skin tones in a wide range of lighting conditions.

It's hard not to warm to the TZ1's charms, but ultimately the Nikon S10's cleaner, sharper images and better image stabilisation add up to a superior package.

SUMMARY

- ✓ Smart, compact design
- ✓ Excellent performance
- ✗ Photos lack detail

ULTRA-ZOOM DIGITAL CAMERA 5.0 megapixels (2,560x1,920 pixels), 10x optical zoom, 13MB internal memory, SD slot, 3.7V 1,000mAh li-ion battery
PART CODE DMC-TZ1EB-S
SUPPLIER www.dabs.com
DETAILS www.panasonic.co.uk

SAMSUNG NV7 OPS

★★★

£245 inc VAT



On paper the NV7 is exactly the sort of camera we've been waiting for. It's compact and stylish, has a large zoom range with optical image stabilisation and includes proper manual exposure and focus control. It's not quite as compact as the Panasonic TZ1 or Nikon S10, both of which lack manual controls, and its 7.1x zoom is smaller. It's a bit of an oddball design, with an ultra-slim body, except for the chunky non-retractable lens. Slim cameras need slim batteries, and this one lasted for only 193 shots. The battery is charged inside the camera so you can't use one while charging another, but the ability to charge via USB is handy.

The camera is controlled via 13 touch-sensitive function buttons along the edge of the high-resolution screen. Certain settings are adjusted by stroking the bottom strip of buttons, which is a novel and surprisingly effective system. Stroking your way through pictures stored on SD card is slow, but otherwise the camera performs well. Manual exposure is good with accurate onscreen feedback, but the manual focus mode is pointless without any digitally zoomed preview.

Sadly, image quality is poor. Colours were generally accurate, although overcast weather gave photos a blue tint. Image detail was decidedly poor, with a combination of soft focus, not entirely effective optical image stabilisation and problems with noise, even at ISO 100.

The NV7 is a great concept, but it lets itself down in a number of areas.

SUMMARY

- ✓ Plenty of features; compact
- ✗ Disappointing image quality
- ✗ Poor battery life

ULTRA-ZOOM DIGITAL CAMERA 7.2 megapixels (3,072x2,304 pixels), 7x optical zoom, 19MB internal memory, SD slot, 3.7V 860mAh li-ion battery
PART CODE 8801089777522
SUPPLIER www.amazon.co.uk
DETAILS www.samsungcamera.co.uk

SONY CyberShot DSC-H2

★★★★★

£220 inc VAT



We're not sure how the style gurus at Sony let such a frumpy-looking camera escape from the factory, but at least owning an H2 shows you're more interested in photography than gadgets. The 2in screen lacks contrast and its 85,000-pixel resolution makes manual focusing harder. Fortunately, areas of sharp contrast (and hence, tight focus) turn bright blue to help you identify them. The 201,000-pixel electronic viewfinder provides more detail if you can be bothered to use it.

Sony's usual menu-based controls are joined by three buttons for focus mode, drive mode and image stabilisation, plus a command dial for shutter speed and aperture adjustment. It's a shame it can't select ISO speeds, too. The preview image's brightness responds to exposure adjustments, and performance is impressive at just 1.2 seconds between shots.

The H2 passed most of our image-quality tests but colours were a touch less saturated than we would like and focus was sometimes a little off. Still, the automatic settings handled tricky conditions well, making the most of its ISO range and pleasantly exposing darker areas of high-contrast scenes. Pictures were a little blotchy at ISO 400 and quite messy at ISO 800, but noise was generally below average. The image stabilisation was less successful than other cameras' systems, though.

It's a little short on stand-out features, but the H2 has a lot going for it, and it's keenly priced too.

SUMMARY

- ✓ Accessible manual controls
- ✓ Fast performance
- ✗ Low-resolution screen

ULTRA-ZOOM DIGITAL CAMERA 6.0 megapixels (2,816x2,112 pixels), 12x optical zoom, 32MB internal memory, Memory Stick Pro Duo, 2x AA (2,500mAh Ni-MH supplied) battery
PART CODE DSC-H2
SUPPLIER www.amazon.co.uk
DETAILS www.sony.co.uk

ULTRA-ZOOM CAMERAS

★ BEST BUY						
MANUFACTURER	CANON	FUJIFILM	FUJIFILM	KODAK	KODAK	NIKON
Model	PowerShot S3 IS	FinePix S6500fd	FinePix S9600	EasyShare P712	EasyShare Z710	CoolPix S10
Rating	★★★★	★★★★★	★★★★	★★★	★★	★★★★★
Effective number of pixels	6.0 megapixels	6.1 megapixels	9.0 megapixels	7.1 megapixels	7.1 megapixels	6.0 megapixels
Viewfinder	Electronic (115,000 pixels)	Electronic	Electronic (235,000 pixels)	Electronic (237,000 pixels)	Electronic (201,000 pixels)	None
LCD screen	2.0in (150,000 pixels)	2.5in (235,000 pixels)	2.0in (235,000 pixels)	2.5in (150,000 pixels)	2.0in (201,000 pixels)	2.5in (230,000 pixels)
Optical zoom	12x (36-432mm)	11x (28-300mm)	11x (28-300mm)	12x (36-432mm)	10x (38-380mm)	10x (38-380mm)
Image stabilisation	Optical, lens-based	No	No	Optical, lens-based	No	Optical, CCD-based
Maximum image resolution	2,816x2,112	2,848x2,136	3,488x2,616	3,072x2,304	3,082x2,314	2,816x2,112
Maximum movie quality	640x480 at 30fps	640x480 at 30fps	640x480 at 30fps	640x480 at 30fps	640x480 at 11fps	640x480 at 30fps
File formats (still; movie)	JPEG; AVI (M-JPEG)	JPEG/RAW; AVI (M-JPEG)	JPEG/RAW; AVI (M-JPEG)	JPEG/RAW/TIFF; QuickTime (M-JPEG)	JPEG; QuickTime (M-JPEG)	JPEG; QuickTime (M-JPEG)
CAMERA CONTROLS						
Exposure modes	Program, shutter priority, aperture priority, manual	Program, shutter priority, aperture priority, manual	Program, shutter priority, aperture priority, manual	Program, shutter priority, aperture priority, manual	Program, shutter priority, aperture priority, manual	Program
Shutter speed	15 to 1/1000 seconds	30 to 1/1000 seconds	30 to 1/1000 seconds	16 to 1/1000 seconds	8 to 1/1000 seconds	Auto
Aperture range	f/2.7 to f/8	f/2.8 to f/11	f/2.8 to f/11	f/2.8 to f/8	f/2.8 to f/8	Auto
ISO range (at full resolution)	80 to 800	100 to 3,200	80 to 1,600	64 to 400	64 to 400	50 to 800
White balance	Auto, 6 presets, manual	Auto, 6 presets, manual	Auto, 6 presets, 2 manual	Auto, 6 presets, manual	Auto, 4 presets	Auto, 5 presets, manual
Additional image controls	11 colour presets	Sharpness, 2 colour presets	Contrast, saturation, sharpness	Contrast, sharpness, 4 colour presets	Sharpness, 4 colour presets	4 colour presets
Manual focus	Yes, buttons	Yes, ring	Yes, ring	Yes, joystick	Infinity only	No
Closest macro focus	0cm	10cm	1cm	10cm	12cm	4cm
Auto-focus modes	Spot	Multi, centre, spot, face detection	Centre, multi, spot	Multi, centre, spot	Multi, centre	Centre, spot, face detection
Metering modes	Multi, centre, spot AF	Multi, spot, average	Multi, spot, average	Multi, centre-weighted, centre, spot	Multi, centre-weighted, centre	Multi
Flash modes	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction
Drive modes	Single, continuous, self-timer, exposure bracket, focus bracket	Single, continuous, self-timer, exposure bracket	Single, continuous, self-timer, exposure bracket	Single, continuous, self-timer, exposure bracket, time lapse	Single, continuous, self-timer	Single, continuous, self-timer, time lapse
PHYSICAL						
Memory type (supplied)	SD slot (16MB MMC)	XD slot (10MB internal)	XD and CompactFlash slots (none)	SD slot (28MB internal)	SD slot (27MB internal)	SD slot (16MB internal)
Power	4x AA (alkalines supplied)	4x AA (alkalines supplied)	4x AA (alkalines supplied)	3.7V 1,800mAh li-ion	2x AA (disposable lithium supplied)	3.7V 1,100mAh li-ion
Battery life (tested)	740 shots	530 shots	398 shots	410 shots	276 shots	432 shots
Connectivity	USB Hi-Speed, AV, DC in	USB Hi-Speed, AV, DC in	USB Hi-Speed, AV, DC in	USB Hi-Speed, AV, DC in	USB Hi-Speed, AV, DC in	USB Hi-Speed, AV
Body material	Plastic	Plastic	Plastic	Plastic	Aluminium	Aluminium
Accessories	USB and AV cables, strap	USB and AV cables, strap, lens hood	USB and AV cables, strap, lens hood	USB and AV cables, charger (with UK and Euro plugs), strap	USB cable, strap	USB and AV cables, charger, strap
Weight, size (HxWxD)	410g, 78x114x81mm	600g, 96x131x128mm	650g, 93x128x129mm	403g, 84x108x72mm	285g, 76x98x73mm	220g, 75x113x41mm
BUYING INFORMATION						
Price including VAT	£243	£231	£300	£236	£200	£214
Supplier	www.rankhour.com	www.savastore.com	www.amazon.co.uk	www.rankhour.com	www.currys.co.uk	www.rankhour.com
Details	www.canon.co.uk	www.fujifilm.co.uk	www.fujifilm.co.uk	www.kodak.co.uk	www.kodak.co.uk	www.nikon.co.uk

★ BEST BUY						
MANUFACTURER	OLYMPUS	PANASONIC	PANASONIC	PANASONIC	SAMSUNG	SONY
Model	SP-510 UltraZoom	Lumix DMC-FZ50	Lumix DMC-FZ7	Lumix DMC-TZ1	NV7 OPS	CyberShot DSC-H2
Rating	★★	★★★★★	★★★★	★★★	★★★	★★★
Effective number of pixels	7.1 megapixels	10.0 megapixels	6.0 megapixels	5.0 megapixels	7.2 megapixels	6.0 megapixels
Viewfinder	Electronic	Electronic (235,000 pixels)	Electronic (114,000 pixels)	None	Electronic (201,000 pixels)	Electronic (201,000 pixels)
LCD screen	2.5in (115,000 pixels)	2.0in (207,000 pixels)	2.5in (114,000 pixels)	2.5in (207,000 pixels)	2.5in (230,000 pixels)	2.0in (85,000 pixels)
Optical zoom	10x (38-380mm)	12x (35-420mm)	12x (36-432mm)	10x (35-350mm)	7x (38-270mm)	12x (36-432mm)
Image stabilisation	No	Optical, lens-based	Optical, lens-based	Optical	Optical, lens-based	Optical, lens-based
Maximum image resolution	3,072x2,304	3,648x2,736	2,816x2,112	2,560x1,920	3,072x2,304	2,816x2,112
Maximum movie quality	640x480 at 30fps	848x480 at 30fps	848x480 at 30fps	848x480 at 30fps	640x480 at 30fps	640x480 at 30fps
File formats (still; movie)	JPEG; QuickTime (M-JPEG)	JPEG/RAW; QuickTime (M-JPEG)	JPEG; QuickTime (M-JPEG)	JPEG; QuickTime (M-JPEG)	JPEG; AVI (MPEG-4)	JPEG; MPEG-1
CAMERA CONTROLS						
Exposure modes	Program, shutter priority, aperture priority, manual	Program, shutter priority, aperture priority, manual	Program, shutter priority, aperture priority, manual	Program	Program, shutter priority, aperture priority, manual	Program, shutter priority, aperture priority, manual
Shutter speed	15 to 1/1000 seconds	60 to 1/1000 seconds	60 to 1/1000 seconds	Auto	15 to 1/1000 seconds	30 to 1/1000 seconds
Aperture range	f/2.8 to f/8	f/2.8 to f/11	f/2.8 to f/8	Auto	f/2.8 to f/7.3	f/2.8 to f/8
ISO range (at full resolution)	50 to 1,600	100 to 1,600	80 to 400	80 to 800	100 to 1,000	80 to 1,000
White balance	Auto, 6 presets, manual	Auto, 5 presets, 2 manual	Auto, 4 presets, 2 manual	Auto, 3 presets, manual	Auto, 6 presets, manual	Auto, 5 presets, manual
Additional image controls	Contrast, saturation, sharpness, noise reduction, white balance fine-tune	Contrast, saturation, sharpness, noise reduction, 4 colour presets, aspect ratio	Contrast, saturation, sharpness, noise reduction, 4 colour presets, aspect ratio	Saturation, 4 colour presets, maximum shutter speed	Sharpness, 6 colour presets	Contrast, sharpness, 4 colour presets
Manual focus	Yes, buttons	Yes, ring	Yes, buttons	No	Yes, buttons	Yes, buttons
Closest macro focus	3cm	5cm	5cm	5cm	1cm	2cm
Auto-focus modes	Multi, centre-weighted, centre	Multi, centre, spot	Multi, centre-weighted, centre	Multi, centre-weighted, centre	Multi	Multi, centre, spot
Metering modes	Multi, centre, spot	Multi, centre-weighted, centre	Multi, centre-weighted, centre	Multi, centre-weighted, centre	Multi, centre-weighted, centre	Multi, centre-weighted, centre
Flash modes	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction
Drive modes	Single, continuous, self-timer, exposure bracket, time lapse	Single, continuous, self-timer, exposure bracket	Single, continuous, self-timer, exposure bracket	Single, continuous, self-timer	Single, continuous, self-timer, exposure bracket	Single, continuous, self-timer, exposure bracket
PHYSICAL						
Memory type (supplied)	XD slot (22MB internal)	SD slot (32MB SD card)	SD slot (16MB SD card)	SD slot (13MB internal)	SD slot (19MB internal)	Memory Stick Pro Duo (32MB internal)
Power	4x AA (alkalines supplied)	7.2V 710mAh li-ion	7.2V 710mAh li-ion	3.7V 1,000mAh li-ion	3.7V 860mAh li-ion	2x AA (2,500mAh Ni-MH supplied)
Battery life (tested)	939 shots	399 shots	446 shots	301 shots	193 shots	620 shots
Connectivity	USB Hi-Speed, AV	USB Hi-Speed, AV, DC in, remote	USB Hi-Speed, AV, DC in	USB Hi-Speed, AV, DC in	USB Hi-Speed, AV	USB Hi-Speed, AV
Body material	Plastic	Plastic and metal	Plastic	Plastic and aluminium	Metal	Plastic
Accessories	USB and AV cables, strap	USB and AV cables, charger, strap, lens hood	USB and AV cables, charger, strap, lens hood	USB and AV cables, charger, strap	USB and AV cables, charger	USB and AV cables, charger, strap, lens hood
Weight, size (HxWxD)	325g, 75x106x70mm	668g, 86x141x142mm	310g, 72x113x79mm	262g, 58x112x40mm	245g, 62x106x64mm	389g, 83x113x94mm
BUYING INFORMATION						
Price including VAT	£208	£347	£209	£211	£245	£220
Supplier	www.morecomputers.co.uk	www.cameras2u.com	www.amazon.co.uk	www.dabs.com	www.amazon.co.uk	www.amazon.co.uk
Details	www.olympus.co.uk	www.panasonic.co.uk	www.panasonic.co.uk	www.panasonic.co.uk	www.samsungcamera.co.uk	www.sony.co.uk

Labs verdict Ultra-zoom cameras

All the cameras here offer a large zoom range but there are a number of different types that will appeal to different people. If you want something you can carry with you at all times, Nikon's S10 will be of particular interest. It lacks advanced photographic controls, but its pocket-sized dimensions will appeal to casual snappers, and its amazingly effective optical image stabilisation makes the most of the generous zoom range.

Fujifilm's FinePix S6500fd Zoom lacks image stabilisation, but this isn't as essential over its 28-300mm zoom range as it is over the others' 36-432mm ranges. Its impressively low noise means users can select high ISO speeds instead to reduce blur. It has sumptuous colour reproduction and great handling. We would love it even more if it had a better-behaved automatic ISO feature, but even so, at this price nothing else comes close.



FUJIFILM
FinePix S6500fd Zoom
★★★★★



PANASONIC
Lumix DMC-FZ50
★★★★★



If you have more to spend, the Panasonic FZ50 has outstanding handling and image quality, and it's a fast performer, too. It also wins our Best Buy award. **CS**